ZYXEL
COMMENTS

COMMUNICATIONS

PM7505-00

XGS-PON VoIP Bridge ONT with 10G LAN and UPS

The Zyxel PM7505-00 XGS-PON VoIP Bridge ONT with 10G LAN delivers high bandwidth with a symmetric 10G/10G profile, enabling a seamless upgrade from existing GPON networks to 10 Gigabit broadband access with minimal CAPEX investment. Its integrated fiber tray design ensures a rugged and reliable cable setup, offering maximum mechanical and environmental protection for demanding installations.

Integrated internet services through 10G fiber

VoIP SIP protocol with 3-way conference calls

Remote management via TR-069 and OMCI

Zyxel-developed OPAL for superior flexibility and faster time to market

Comprehensive QoS for enhanced triple-play experience

Benefits

Next-gen GPON offers seamless triple-play services

The Zyxel PM7505-00 serves as a simple bridge that enables service providers to deliver symmetric 10G/10G data access to subscribers under the P2MP structure. The PM7505-00 provides high-quality triple-play services such as voice, data, and video over fiber optics.

Same user experience with advanced product combinations

The P2MP structure enables service providers to create a truly converged network. The PM7505-00 performs as a Layer-2 Optical Network Terminal (ONT) connecting to any Layer-3 devices such as routers, Wi-Fi APs, and home gateways. Given the rapid evolution of WLAN technology and gateway interface requirements, a two-box solution offers service providers the flexibility to substitute the second box for the same user experience.

Datasheet PM7505-00

Comprehensive QoS for superior network efficiency

Based on your service offerings to customers – you can freely define the QoS policies and prioritize mission-critical traffic such as voice. Defining the QoS will improve your customer's network efficiency and give them the super-fast multi-play service quality they want.

TR-069 remote management for lower OPEX

Supporting the TR-069 remote management specifications, the PM7505-00 empowers service providers to process remote configuration, upgrade software, run diagnostics and provide management – all from customer support offices located anywhere. This greatly reduces service expenses, all while enhancing customer satisfaction.

Zyxel OPAL firmware realizes the flexibility and faster time to market

Compliant with the same OPAL firmware trunk applied in all Zyxel CPEs, the PM7505-00 inherits a rich, field-proven feature set including TR-069 and more. Service providers can ensure the same user experience, after migrating to new devices.

Specifications

System specifications

XGS-PON compliance
- Comply with ITU-T G.9807.1
- DS/US speed: 9.95328 /9.95328 Gbps
- Wavelength:
  1577 nm (DS) & 1270 nm (US)
- Comply with class N1
- Physical distance reach to 20 km
- Dynamic Bandwidth Allocation (DBA)
- Configurable AES DS and FEC DS/US
- GPON Encapsulation Method (GEM) supports Ethernet packet
- Supports GEM header removal/ insertion and data extraction/ segmentation (GEM SAR)
- Supports up to 32 T-CONTs each with priority queues (US); Supports up to 256GEM ports
- Flexible mapping between T-CONTs and GEM port

Layer 2 networking features
- MAC address learning
- MAC filtering
- Multicast transparent
- IPv6 address transparent

Multicast
- IGMP v1/v2/v3 snooping
- IGMP immediate leave
- IPv6 MLD v1/v2 snooping

Feature capability
- VLAN IEEE 802.1Q
- Ethernet port based VLAN tag and untag
- Supports protocol based VLAN
- 1:1 VLAN, N:1 VLAN, VLAN transparent bridge
- LAN port-based VLAN tag add and tag removal
- Q in Q VLAN
- Supports at most 64 concurrent configurable VLANs with VLAN ID between 1 and 4095
- Supports up to 2K MAC address entries

QoS
- Traffic classification and tagging via DSCP/VLAN/802.1P-bit
- Gem port rate limitation for US/DS traffic
- Per-port QoS and CoS mapping according to IEEE 802.1q and IEEE 802.1p priority
- SP/WRR/SP+WRR

Management
- Standard OMCI (ITU-T G.988)
- SSH (CLI)
- Web GUI (HTTP/HTTPS)

VoIP/Phone features
- SIP (Session Initiation Protocol, RFC 3261)
- Codec: G.711u, G.711a, G.729, G.726-24, G.726-32, G.722
- DTMF tone: detection and generation
- DTMF tone relay by in-band and out-of-band (RFC 2833, SIP INFO)
- Fax (G.711 Pass-through, T.38 Relay)
- Call waiting (reject waiting call, disconnect existing call, keep existing call)
- Call forwarding (unconditional, busy, no answer)
- Call transferring (attended, unattended)
- Caller-ID display (on the LCD of the telephone set)
- Call hold/recover
- Three-way conference
- Second call (adding an outgoing call)
- Switch between 2 ongoing calls

Hardware specifications

WAN
• One XGS-PON uplink with SC/APC connector

LAN
• One 1GbE RJ-45 port
• One 10GbE RJ-45 port

VoIP
• One RJ-11 port

Others
• Reset button
• DC jack
• UPS
• Clamp

LED indicators
• Power
• UPS
• PON
• VoIP

Power consumption
• 12 V DC/1.5 A
• 18 Watt max

Physical specifications
• Item dimensions (LxWxH):
  145 x 125 x 45 mm
  (5.71" x 4.92" x 1.77")
• Item weight: 263 g (0.58 lb.)
• Packing dimensions (LxWxH):
  233 x 170 x 53 mm
  (9.17" x 6.70" x 2.09")
• Packing weight: 571 g (1.26 lb.)

Environmental specifications

Operating environment
• Temperature: 0°C to 40°C
  (32°F to 104°F)
• Humidity: 10% to 90% RH
  (non-condensing)

Storage environment
• Temperature:
  -30°C to 70°C (-22°F to 158°F)
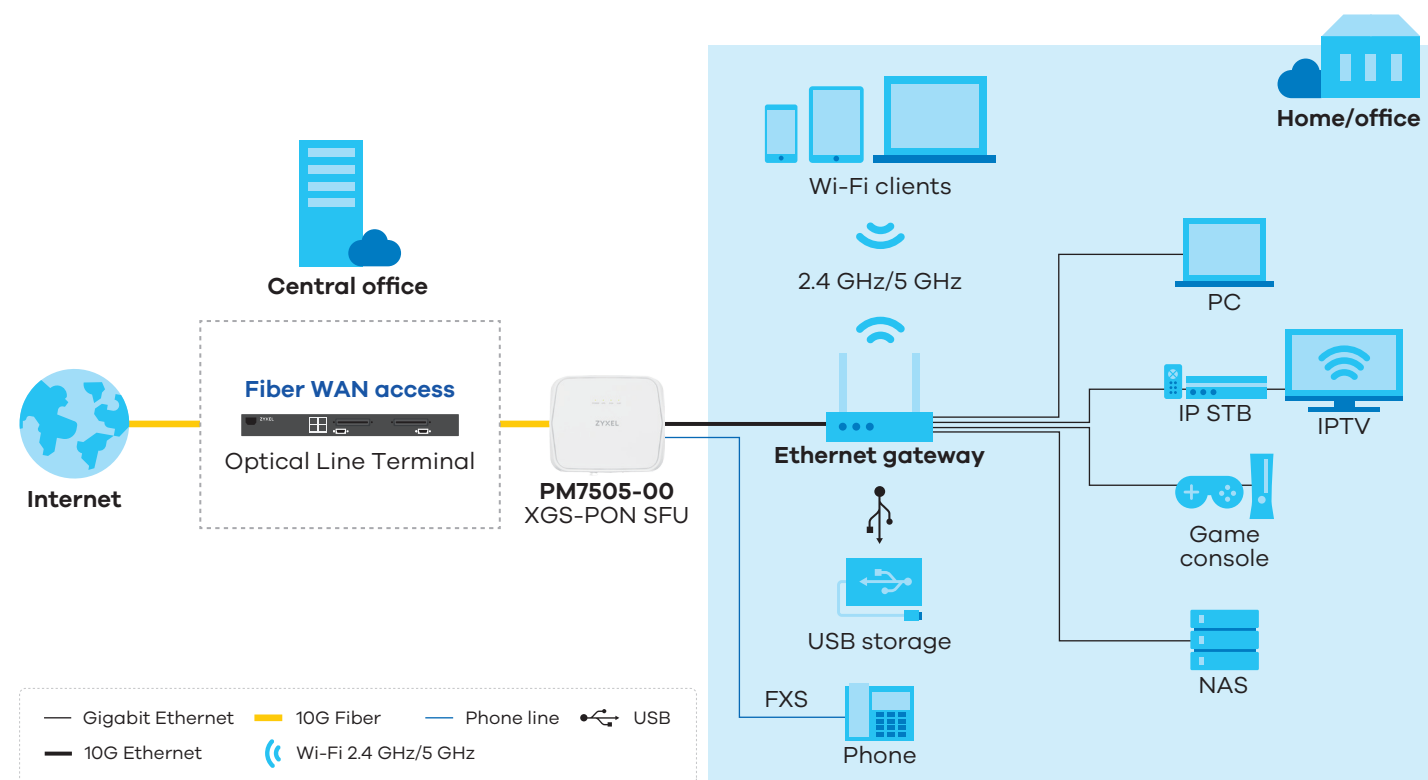• Humidity:
  10% to 95% RH (non-condensing)

Certification
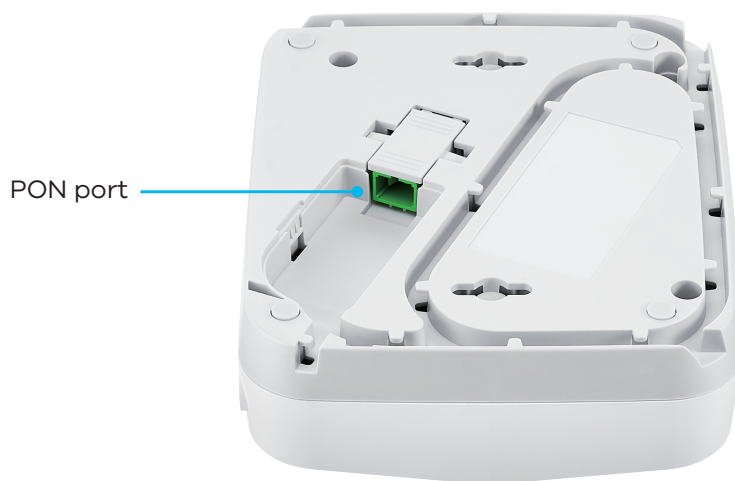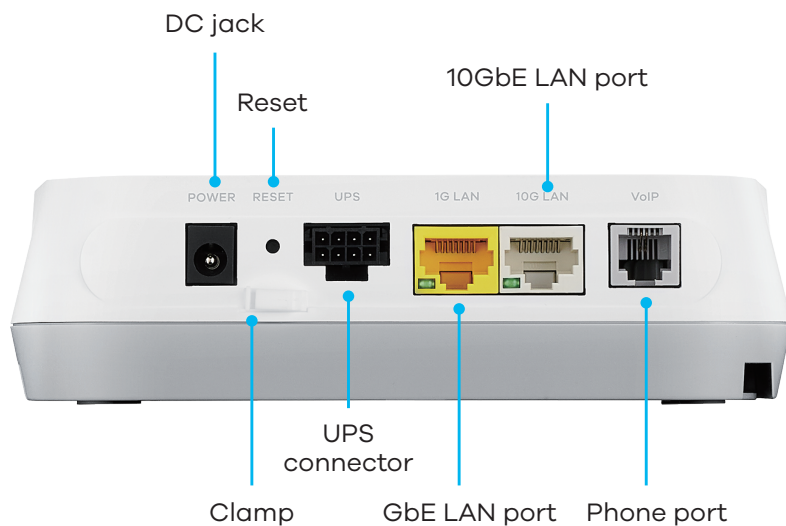• FCC, ISED
• Safety: FDA

Package contents
• Device
• Power adapter
• Ethernet cable Cat. 6
• Quick Start Guide

Application diagram

Hardware description

POWER | UPS | PON | VoIP

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DC jack
Reset
10GbE LAN port

POWER | RESET | UPS | 1G LAN | 10G LAN | VoIP

UPS connector
Clamp
GbE LAN port
Phone port

PON port